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ABSTRACT

Fourteen institutionalized profoundly retarded Ss (seven females, median age 20 years, and seven males, median age 10 years) who received no intervention training program were assesed on the Balthazar Scales of Adaptive Behavior (BSAB), Sections I and II, to determine whether the Ss' spontaneous social coping behavior would improve as a result of spontaneous maturation during a 6-month period. Analysis of self-help scales indicated that females were functioning initially at a higher level of proficiency than the males in all skill areas. Comparison of baseline social scale scores showed some sex differences in social coping behaviors. Social vocalization, appropriate use of objects, and response to instructions were significantly more frequent among females. Results of ratings showed that no significant changes in socially adaptive behaviors occured to support the hypothesis of time and maturation being the determining factors. The results implied that passive and unsophisticated programing is ineffective for achieving behavioral development. Results also implied that the BSAB scales could be used as a paradigm for development and evaluation of a training program with specific behavioral goals. (MC)

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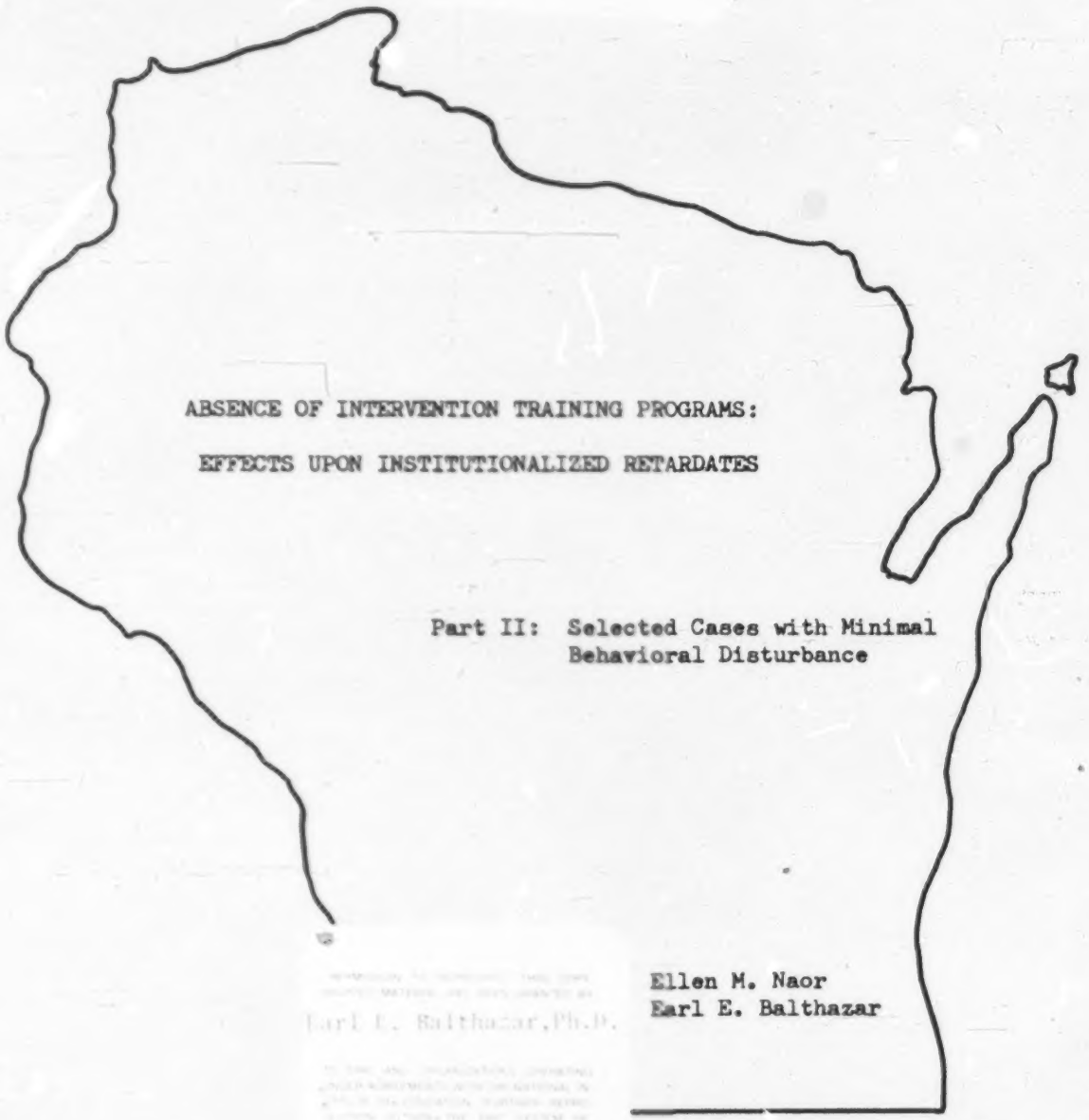

ABSENCE OF INTERVENTION TRAINING PROGRAMS:

EFFECTS UPON INSTITUTIONALIZED RETARDATES

Part II: Selected Cases with Minimal Behavioral Disturbance

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ABSENCE OF INTERVENTION TRAINING PROGRAMS: EFFECTS UPON INSTITUTIONALIZED RETARDATES

Part II: Selected Cases with Minimal Behavioral Disturbance

Introduction

In order to be useful, an intervention training program for severely and profoundly retarded individuals must produce behavior changes in excess of any which might occur naturally in such subjects. However, so far little descriptive material is available on what does happen to the adaptive behaviors of institutionalized retardates in the absence of structured learning or training experiences. Are there changes in the behaviors of such individuals over a period of time? Does their behavior vary randomly, or does it tend to improve or deteriorate? Does spontaneous maturation occur without external direction or stimulation?

Part I: Selected Cases of Emotional and Behavioral Disturbance (Balthazar, Naor, & Sindberg, 1973) described the social coping behaviors of a group of 15 institutionalized, very disturbed retardates over a period of six months, in the absence of intervention training programs. No statistically significant variation occurred; there was no evidence for spontaneous behavioral maturation. These findings have proved useful as comparative data for evaluating the efficacy of specific training programs. However, there is need for additional quantitative information on the behaviors of other types

of subjects, with specified characteristics: males and females, individuals of various ages, disturbed and non-disturbed retardates, residents of other institutions, etc. This report describes the socially adaptive behaviors of severely and profoundly retarded individuals by sex; subjects were generally older than those described in Part I and were from a different institution. They had no acute behavioral disturbances, as did the group previously studied. Again, no statistically significant variation in behavior was found in the absence of intervention programming; there was no evidence for any spontaneous development. This data thus extends to a larger group of subjects the conclusion that only negligible behavioral changes occur in the absence of systematic, formal training programs.

Importance of "Control" Data: The value of information on "control" subjects, who are not included in any intervention programming, has been discussed in Part I of this monograph series; salient points of that discussion are repeated here. Evidence of the lack of spontaneous maturation and/or incidental learning is important in itself. In addition, data on an authentic "control" group provides a reference base for program studies on similar subjects. As stated previously, obtaining an adequate control group as part of every study design can be difficult: the non-introduction of the experimental variable (e.g., a specific program) is not a sufficient criterion for judging the appropriateness of a control group. Controls should be representative of the target group in all possible respects. Some of the

problems in this regard have been considered by Stanley (1967). Then, too, subjects who are suitable may already be involved in some other type of programming. Conventionally, the withholding of program participation in order to create a control group is often considered unethical or lacking in humanitarianism.

In order to fully utilize information from various groups of subjects, both control and experimental, standardized objective measuring instruments must be used to provide precise descriptions of the findings. In both parts of this monograph series, the data are described and analyzed in terms of the Balthazar Scales of Adaptive Behavior (BSAB), Sections I and II (Balthazar, 1973a, 1973b). These scales are designed to evaluate the functional independence (BSAB-I) and the socially adaptive behaviors (BSAB-II) of the severely and profoundly mentally retarded. The scales can be used both in the systematic development and evaluation of programs[1] and, as in the present study, in measuring spontaneous changes in behavior over time in the absence of concrete programming.

Summary of Part I: The subjects described in Part I included 11 males and 4 females. Because there were so few females, separate analyses for each sex were not carried out. The subjects were drawn from among those selected by nursing personnel on the basis of their self-destructive behavior, difficulties in general nursing care, degree

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[1] A paradigm for systematic planning, evaluation and development has been outlined by Balthazar (1971a, 1971b, 1972, 1973a, 1973b).

of emotional disturbance, and severe behavior problems. Only children 12 years old or under were considered. These individuals were among the most difficult and unmanageable of the residents ther in the institution.

At the time of the study reported in Part I, the institution concerned was rapidly expanding. Most of the new patients were young transfer cases from institutions which were not equipped to care for the more severely retarded and emotionally disturbed individuals. There were, as yet, no formal behavioral programs on the general wards. Time and maturational factors were thus the major determinants of variation in the behavior of subjects living on the general wards during that period. It is surmised that incidental, randomized, and unsystematic interpersonal contact had only a secondary effect upon the subjects studied. Retest evaluations carried out at three and six months after the initial evaluation indicated only negligible changes in the social coping behaviors of these individuals.

Information was also obtained on anticonvulsants, sedatives, and tranquilizers which were prescribed for these subjects during the study period. There were some changes in medications, but these did not appear to be associated with any changes in behavior.

Material (Part II): As indicated above, the subjects to be described in this Part II of the series differed from those of Part I in several respects. These subjects were older and had no acute behavioral

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problems. The institution is located in a different region and had been developed with a different training and treatment orientation. Retest evaluations were performed only once, six months after the initial baseline evaluations. Data for males and females were analyzed separately.

The institution at which this study took place is the oldest and largest residential facility for the mentally retarded in the state. As a result of changing patterns of care for the retarded, growing numbers of those being admitted to this facility were individuals functioning at the severely and profoundly retarded levels rather than at the higher levels of retardation, as formerly. Consequently, a greater emphasis was needed on programs designed specifically to maximize the growth and development of the severely and profoundly retarded residents. The completion of a large new infirmary building for these residents gave further impetus to immediate program development. A project aimed at developing programs for self-help skill training and the general enrichment of residential life was therefore established.[2]

Prior to the initiation of this project, overcrowding and understaffing had precluded the implementation of formal or systematic behavioral programs. In fact, staffing limitations seriously restricted efforts to provide the highly individualized attention necessary for

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[2] The project was supported by Hospital Improvement Grant, 1 R20 MRO 2111-1 from the U. S. Department of Health, Education & Welfare, Public Health Service.

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the efficient development of adaptive behaviors. Programming had, of necessity, been informal and unsophisticated. These were the conditions prevailing on the general wards at the time these data were collected. The design of the pilot phase of the project included both experimental and control subjects. The former were transferred to experimental treatment wards where ad hoc treatment and training programs were introduced, while the control subjects remained on their home wards, receiving routine care only. Any changes in the behaviors of the control subjects can thus be attributed for the most part to the effects of time or maturation within a random, unsystematic interpersonal environment.

By the time this project was concluded, much headway had been made in providing adequate, systematic, individualized training programs for the residents. The success of the pilot project in improving eating skills was described by Balthazar, English, & Nelson (1970). Evaluation of the functional skills program developed in the subsequent phase of the project is found in an article by Naor & Balthazar (1973a). The effects of the self-help training program upon social coping behaviors are described by Naor & Balthazar (1973b).

Subjects

The data reported here were collected during the pilot phase of a project conducted during the years 1967-70 at a middle western public

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institution for the mentally retarded.[3] Seventy-eight severely and profoundly retarded subjects were included in the pilot study; residents with acute behavioral problems were not considered. Sixty-four individuals were randomly selected to occupy two experimental treatment wards. The remaining seven males and seven females remained on their home wards as control subjects. These are the subjects on whom this analysis is based.

According to the incomplete information available, the median age for the female group was about 20 years; for the males it was about 10 years. Most patients were ambulatory and without severe physical defects. At least two of the females were restrained; little information is available for the males. These residents had heretofore experienced little if any programmed or systematic stimulation.

The self-help skills of the subjects were described in the earlier publication on the pilot phase of this study (Balthazar, English, & Nelson, 1970). In brief, the females showed a relatively high degree of proficiency in all areas, i.e., eating, drinking, dressing and toileting. The males were consistently much less proficient in all of these skills.

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[3] The pilot project is described by Nelson (1968) in the Annual Report 1967-1968, Hospital Improvement Grant 1 R20 MRO 2111-1.

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Method

Baseline evaluations were accomplished by trained technicians who were not part of the regular ward personnel. Retest evaluations were carried out six months after the initial observations. The social coping behaviors of the subjects were measured using an early version of the BSAB-II (Balthazar, 1973b). For the current analysis, the data were recast into the format of the BSAB-II itself.

In brief, the BSAB-II provides measures of such social behavioral categories as unadaptive self-directed and interpersonal behaviors, adaptive self-directed and interpersonal behaviors, verbal communication, play activities, and response to instructions. These categories are broken down into scales and subscale items. Each subscale item provides information on a specific and discrete social behavior; these are listed in the Appendix.[4] The BSAB-II was designed and standardized for ambulant severely and profoundly mentally retarded individuals. Scoring is on the basis of direct observation: a count is made of the number of times each specific subscale item occurs during the rating session. In this study, 12 ten-minute rating sessions were used; the scores were cumulated over all sessions. The reliabilities of both the BSAB-II and its early version are good (Balthazar, 1973b). A

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[4] It should be noted that the scores on some scales, in particular "Failure to Respond," "Response to Instructions," and "Response to Firm Instructions," are quite dependent on extrinsic factors such as the provision of adequate stimulus. Score changes on these scales may thus be as much a function of environmental factors as of the subject himself.

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description of the early version of the BSAB-II is found in the publications on the studies leading to the development of the BSAB-II (Balthazar & English, 1969a, 1969b, 1969c).

Non-parametric procedures are the most suitable methods for statistical analysis of data derived from the BSAB-II. Since the BSAB-II scales are highly correlated, multivariate methods were used[5], based on an extension of the Friedman two-way analysis of variance by ranks, ranking after alignment[6] (Puri & Sen, 1971). The significance levels were estimated by sampling the permutation distribution.[7]

Results

A comparison of the baseline and retest scores for social coping behaviors is shown in Figure 1, for males and females.[8]

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[5] With multivariate methods, several variables are treated simultaneously, whereas with univariate methods, each variable is considered independently. When variables are correlated, treating them in univariate fashion may introduce bias. Multivariate methods are therefore preferable with correlated variables, providing the necessary procedures are available.

[6] Using means for alignment.

[7] The advice of Dr. Jerome Klotz of the Department of Statistics, University of Wisconsin, Madison, and the efforts of William Davis, M.A., of that Department, in developing appropriate applications of the multivariate methodology, are gratefully acknowledged.

[8] No more than one subject scored on either baseline or retest on "Inappropriate Contact with Others," "Play Activities," and "Cooperative Contact"; these scales have therefore been excluded from the analysis.

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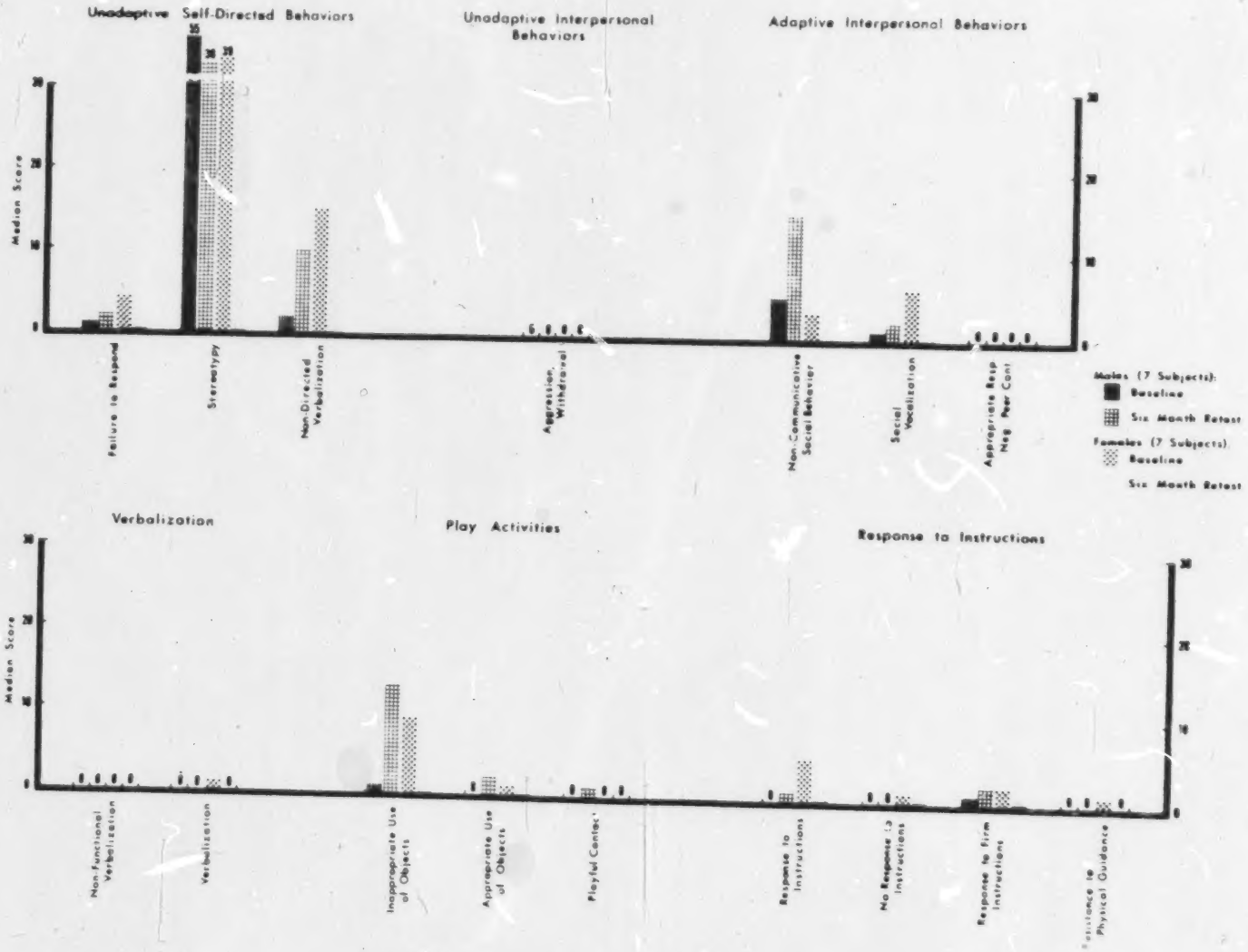
Figure 1

BSAB-II MEDIAN BASELINE & RETEST SCORES FOR CONTROL SUBJECTS, BY SEX

(Functional Skills Pilot Program, 1967-1968)



To facilitate the comparison, the score ranges are given as well as the medians in Tables 1 and 2, for males and females respectively. Using a multivariate procedure, no statistically significant differences ($\alpha = .05$) were found between the baseline and retest scores for either males or females.

In the analysis of the self-help skills for these subjects, referred to previously (Balthazar, English, & Nelson, 1970), the females were found to be functioning initially at a higher level of proficiency than the males in all skill areas. Comparison of the baseline social scale scores (Table 3) shows some differences by sex in social coping behaviors, as well. The median values for females were higher than for males on many scales, although the differences were not all statistically significant.[9] "Social Vocalization," "Appropriate Use of Objects," and "Response to Instructions" were significantly more frequent ($\alpha = .05$) among females than among males.

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[9] The Wilcoxon two-sample test was employed, using the adjustment for zeros and ties suggested by J. Klotz (Personal communication, October, 1972).

TABLE 1: BASELINE AND RETEST SCORES FOR MALES

MEDIANS AND RANGES

Scale	Baseline Median	Baseline Range	Retest Median	Retest Range
UNADAPTIVE SELF-DIRECTED BEHAVIORS:				
Failure to Respond	1.0	0-5	2.0	0-6
Stereotypy	55.0	3-117	38.0	20-107
Non-Directed Verbalization	2.0	0-14	10.0	0-24
UNADAPTIVE INTERPERSONAL BEHAVIORS:				
Aggression, Withdrawal	0	0-5	0	0-10
ADAPTIVE INTERPERSONAL BEHAVIORS:				
Non-Communicative Social Behaviors	5.0	0-22	15.0	0-26
Social Vocalization and Gestures	1.0	0-7	2.0	0-9
Appropriate Response to Negative Peer Contact	0	0-2	0	0-3
VERBALIZATION:				
Non-Functional Verbalization	0	0	0	0
Echolalia	0	0	0	0-1
PLAY ACTIVITIES:				
Inappropriate Use of Objects	1.0	0-13	13.0	0-48
Appropriate Use of Objects	0	0	2.0	0-6
Playful Contact	0	0-2	1.0	0-13
RESPONSE TO INSTRUCTIONS:				
Response to Instructions	0	0-3	1.0	0-2
No Response to Instructions	0	0-2	0	0-1
Response to Firm Instructions	1.0	0-7	2.0	0-7
Resists Physical Guidance	0	0	0	0-1

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TABLE 2: BASELINE AND RETEST SCORES FOR FEMALES

MEDIANS AND RANGES

Scale	Baseline Median	Baseline Range	Retest Median	Retest Range
UNADAPTIVE SELF-DIRECTED BEHAVIORS:				
Failure to Respond	4.0	0-13	4.0	0-14
Stereotypy	39.0	20-79	30.0	14-100
Non-Directed Verbalization	15.0	0-25	10.0	0-45
UNADAPTIVE INTERPERSONAL BEHAVIORS:				
Aggression, Withdrawal	0	0-7	0	0-5
ADAPTIVE INTERPERSONAL BEHAVIORS:				
Non-Communicative Social Behaviors	3.0	0-28	5.0	1-27
Social Vocalization and Gestures	6.0	1-17	5.0	0-10
Appropriate Response to Negative Peer Contact	0	0-2	0	0-1
VERBALIZATION:				
Non-Functional Verbalization	0	0-10	0	0-15
Verbalization	1.0	0-3	0	0-6
PLAY ACTIVITIES:				
Inappropriate Use of Objects	9.0	1-25	9.0	4-34
Appropriate Use of Objects	1.0	0-38	3.0	0-17
Playful Contact	0	0	0	0-4
RESPONSE TO INSTRUCTIONS:				
Response to Instructions	5.0	0-9	1.0	0-5
No Response to Instructions	1.0	0-9	1.0	0-5
Response to Firm Instructions	2.0	1-6	1.0	0-7
Resists Physical Guidance	1.0	0-3	0	0-1

TABLE 3: MEDIAN BASELINE SCORES FOR MALES AND FEMALES: SIGNIFICANCE OF DIFFERENCES

Scale	Median Scores Males	Females	p[a]
UNADAPTIVE SELF-DIRECTED BEHAVIORS:			
Failure to Respond	1.0	4.0	.12
Stereotypy	55.0	39.0	ns[b]
Non-Directed Verbalization	2.0	15.0	.08
UNADAPTIVE INTERPERSONAL BEHAVIORS:			
Aggression, Withdrawal	0	0	ns
ADAPTIVE INTERPERSONAL BEHAVIORS:			
Non-Communicative Social Behaviors	5.0	3.0	ns
Social Vocalization and Gestures	1.0	6.0	.04
Appropriate Response to Negative Peer Contact	0	0	ns
VERBALIZATION:			
Non-Functional Verbalization	0	0	ns
Verbalization	0	1.0	.07
PLAY ACTIVITIES:			
Inappropriate Use of Objects	1.0	9.0	.14
Appropriate Use of Objects	0	1.0	.02
Playful Contact	0	0	ns
RESPONSE TO INSTRUCTIONS:			
Response to Instructions	0	5.0	.04
No Response to Instructions	0	1.0	ns
Response to Firm Instructions	1.0	2.0	.16
Resists Physical Guidance	0	1.0	.07

[a] Two-tailed probabilities.

[b] $p > .25$

Discussion

Time and maturation, for the most part, were the determining factors in any variation in the social behaviors of these severely and profoundly retarded individuals during this period, since they received no formal behavioral training during the interval. No significant changes occurred in their socially adaptive behaviors. There was no "time effect" within the six months' duration of the study. These findings substantiate those of Part I of this monograph series in providing a quantitative confirmation of the inadequacy of informal and unsystematic programming in residential settings.

We stress again that these subjects differed in age, degree of behavioral disturbance, and institution from those described in Part I. In addition, males and females were analyzed separately. However, all groups of subjects demonstrated identical patterns of negligible change in social coping behaviors in the absence of intervention training programs. Passive and unsophisticated programming is thus shown to be ineffective in achieving any kind of behavioral development. There is no evidence for the occurrence of any spontaneous maturation of social behaviors.

At the outset of this analysis, it was hoped that longitudinal information could be utilized on those pilot subjects who were subsequently placed in the experimental treatment wards of the project. However, this approach has not proved feasible. Only half of the

original control subjects, two males and five females, were later included in the experimental wards. These few subjects were too heterogeneous with regard to sex, age, baseline profiles, and specific training programs to permit meaningful conclusions to be drawn.

Program Development: We now turn to consider the import of this study in terms of the individual subjects themselves. The model established by Balthazar for program planning and development (1971a, 1971b, 1972, 1973a, 1973b) was used in the course of the project itself to provide individualized programs in self-help skills. The paradigm is equally applicable in the area of the socially adaptive behaviors; an example of such use follows.

The measurement of baseline behaviors, selection of program goals, and implementation of a given program together comprise the first steps in the Balthazar paradigm for program development, which is summarized in Table 4.

TABLE 4: PARADIGM FOR PROGRAM DEVELOPMENT

1. Orientation and Pre-Baseline Studies
2. Baseline Observations ⟶ Program Selection
3. Program Implementation
4. Retest ⟶ Program Evaluation
5. Program Development ⟶ Stockpiling

The BSAB-I and BSAB-II are designed to facilitate this systematic design of specific, individualized training programs by providing a means for the selection of appropriate "target behaviors" as program goals; detailed discussion is found in the administration manuals (Balthazar, 1973a, 1973b). Complete behavior profiles can be obtained using these scales and the subscale items of which they are comprised. Specific low points in adjustment are thus highlighted. Programs can then be directed towards modifying these target behaviors.

A baseline profile taken from a subject in this study, depicted in Table 5, can serve as an example of this use of the BSAB-II. The high scores for Scale 1, "Failure to Respond," and Scale 2, "Stereotypy", suggest that the subject demonstrates stereopathy, i.e., stereotypic behaviors which substitute for appropriate responses to external cues, thus providing social isolation (Balthazar, 1973b). These behaviors would be appropriate target behaviors for a program aimed at improving the subject's socially adaptive behaviors.

TABLE 5: BSAB-II PROFILE SCORES FOR A TYPICAL SUBJECT

BSAB-II Subscale Item[a]	Score	BSAB-II Subscale Item[a]	Score	BSAB-II Subscale Item[a]	Score
1a	4	9a/s	2	14a	-
1b	-	9a/p	-	14b	1
1c	2	9b/s	1	14c	1
1d	7	9b/p	-	14d	-
Scale 1	13	9c/s	-	Scale 14	2
		9c/p	-		
2a	17	Scale 9	3	15a/s	-
2b	45			15a/p	-
2d	17	10a	-	15b/s	-
2e	-	10b	-	15b/p	-
Scale 2	79	10c	-	Scale 15	-
		10d	5		
3a	-	10e	2	16a/s	-
3b	-	10f	1	16a/p	-
3e	-	Scale 10	8	16b/s	-
Scale 3	-			16b/p	-
		11a	-	Scale 16	-
6a/s[b]	-	11b	-		
6a/p[c]	-	11c	-	17a	-
6b/s	-	Scale 11	-	17b	5
6b/p	-			17c	-
Scale 6	-	12a	-	17d	2
		12b	-	Scale 17	7
7a/s	-	12c	-		
7a/p	1	12d	-	18a	3
7b/s	-	Scale 12	-	18b	1
7b/p	1			18c	3
7d/s	-	13a	-	Scale 18	7
7d/p	-	13b	1		
Scale 7	2	13c	-	19a	-
		13d	-	Scale 19	-
		13e	-		
		13f	-		
		13g	-		
		Scale 13	1		

[a] Refer to Appendix for subscale item definitions.

[b] s: staff-directed behaviors.

[c] p: peer-directed behaviors

An essential component of the paradigm is the objective appraisal of program outcome. The effectiveness of a program can be determined for an individual subject or in terms of the overall result for a group of subjects. Thus, after a program had been decided upon and implemented, the BSAB-II would be used again to obtain retest measurements which, when compared with the baseline, would provide a quantitative assessment of the results of the program.

The final step of the model is the evaluation of a specific training program in comparison with similar programs among other subjects, and the ultimate standardization, classification, documentation, and storage of effective programs.

Conclusion

This monograph series (Part I and Part II) has shown that, in the absence of intervention training programs, there is no significant variation over a period of six months in the socially adaptive behaviors of severely and profoundly retarded, institutionalized individuals. Identical conclusions in this regard are drawn from the studies of two different groups of subjects:

(i) young retardates (mostly male) with severe behavioral disturbance; new residents at a recently opened facility; and

(ii) older retardates, males and females, with no acute behavioral problems; residents at an older established institution.

The need for systematic, objectively tested training programs with specific behavioral goals is thus demonstrated. An established paradigm for the development and evaluation of such programs is pointed out, together with measuring instruments which facilitate their design and assessment.

In a sense, the control groups described in this monograph series can be considered as "experimental" groups in a study of the effects of time and maturation, themselves. Previously studied groups of systematically programmed subjects (Balthazar, English, & Sindberg, 1971; Naor & Balthazar, 1973b) then become "controls," drawn from the same populations and observed with the same standardized measuring instrument. Individuals participating in the formal training programs did demonstrate behavior changes within a six-month period, whereas those not subject to intervention programming showed only negligible changes in behavior.

APPENDIX

SCALES OF THE BSAB-II[10, 11]

UNADAPTIVE SELF-DIRECTED BEHAVIORS

Scale 1: Failure to Respond

a) No response to ward staff
b) No response to negative or inappropriate peer contact
c) No response to positive or appropriate peer contact
d) No response to communication

Scale 2: Stereotypy (Stereopathy), Posturing, Including Objects

a) Multiple, non-functional isolated behavior
b) Physical repetition
c) Self-induced emesis
d) Posturing
e) Vocal play
f) Object stereotypy
g) Self-mutilation

Scale 3: Non-Directed, Repetitious Verbalization; Smiling Laughing Behaviors

a) Non-directed verbalization
b) Verbal repetition
c) Isolated smiling, laughing behavior

Scale 4: Inappropriate Self-Directed Behavior

a) Inappropriate self-directed behavior
b) Genital play, masturbation

Scale 5: Disorderly, Non-Social Behaviors

a) Spontaneous, disturbed behavior
b) Frustration reaction
c) Destructive behavior

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[10] The earlier version of the BSAB-II used in the study reported here did not include Scales 4, 5, and 8.

[11] These scales are copyrighted by Consulting Psychologists Press, Palo Alto, California, 1973.

For administration, definition, and scoring of these scales refer to Balthazar, E. E. The Balthazar Scales of Adaptive Behavior, II. The Scales of Social Adaptation. Published by Consulting Psychologists Press, Inc., 577 College Avenue, Palo Alto, California, 94306.

UNADAPTIVE INTERPERSONAL BEHAVIORS

Scale 6: Inappropriate Contact with Others

a) Responds inappropriately
b) Initiates inappropriate contact

Scale 7: Aggression, Withdrawal

a) Responds aggressively
b) Initiates aggression
c) Vocal or verbal aggression
d) Withdraws from approach

ADAPTIVE SELF-DIRECTED BEHAVIORS

Scale 8: Generalized, Exploratory, Recreational Activity

a) Inactive
b) Generalized activity
c) Exploratory, searching activity
d) Recreational activity
e) Self-regard

ADAPTIVE INTERPERSONAL BEHAVIORS

Scale 9: Fundamental Social Behaviors: Non-Communication

a) Approaches
b) Responds physically
c) Initiates physical contact

Scale 10: Fundamental Social Behaviors: Social Vocalization and Gestures

a) Responds with social vocalization
b) Initiates social vocalization
c) Responds with gestural communication
d) Initiates gestural communication
e) Responds with expressive communication
f) Initiates expressive communication

Scale 11: Appropriate Response to Negative Peer Contact

a) Responds with communication
b) Responds with non-aggressive defense
c) Responds with defensive aggression

VERBAL COMMUNICATION

Scale 12: Non-Functional, Repetitious, or Inarticulate Verbalization

a) Responds with non-functional verbalization
b) Initiates non-functional or repetitious verbalization
c) Responds with inarticulate verbalization
d) Initiates inarticulate verbalization
e) Responds with repetitious verbalization

Scale 13: Verbalization

a) Responds with single word verbalization
b) Initiates single word verbalization
c) Responds with combined verbalization
d) Initiates combined verbalization
e) Responds with integrated verbalization
f) Initiates integrated verbalization
g) Continuous conversation

PLAY ACTIVITIES

Scale 14: Object Relations

a) Carries/holds objects
b) Manipulates objects inappropriately
c) Uses objects appropriately
d) Creative use of objects

Scale 15: Playful Contact

a) Responds playfully
b) Initiates playful contact

Scale 16: Play Activities

a) Responds appropriately to play
b) Initiates play
c) Continuous play

RESPONSE TO INSTRUCTIONS

Scale 17: Response to Instructions

a) Responds to general group instructions
b) Responds to simple instructions
c) Responds to complex instructions
d) Non-compliance

Scale 18: Response to Firmly Given Instructions

a) Responds to firmly given instructions
b) Resists physical guidance
c) Responds to physical guidance

Scale 19: Cooperative Contact

a) Responds with cooperative contact
b) Initiates cooperative contact
c) Responds to task assignment by direction
d) Initiates task assignment

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